

Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions
(formerly Eaton)

Brand: LUMARK

Report Number: P270439

Luminaire Tested: **NAV-AF-03-D-UNV-SL3-7027-1200-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P270439
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24263)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-AF-03-D-UNV-SL3-7027-1200-HSS
Description: NAVION ROADWAY AND AREA LUMINAIRE
(3) 70 CRI, 2700K, 1200mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III
SPILL LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 14655.5 lumens
Efficiency: N/A
Efficacy: 76.7 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1.5' x H: 0')
IES Classification: Type III - Medium - Non-Cutoff
BUG Rating: B1 - U0 - G3

Input Watts (W): 191
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT

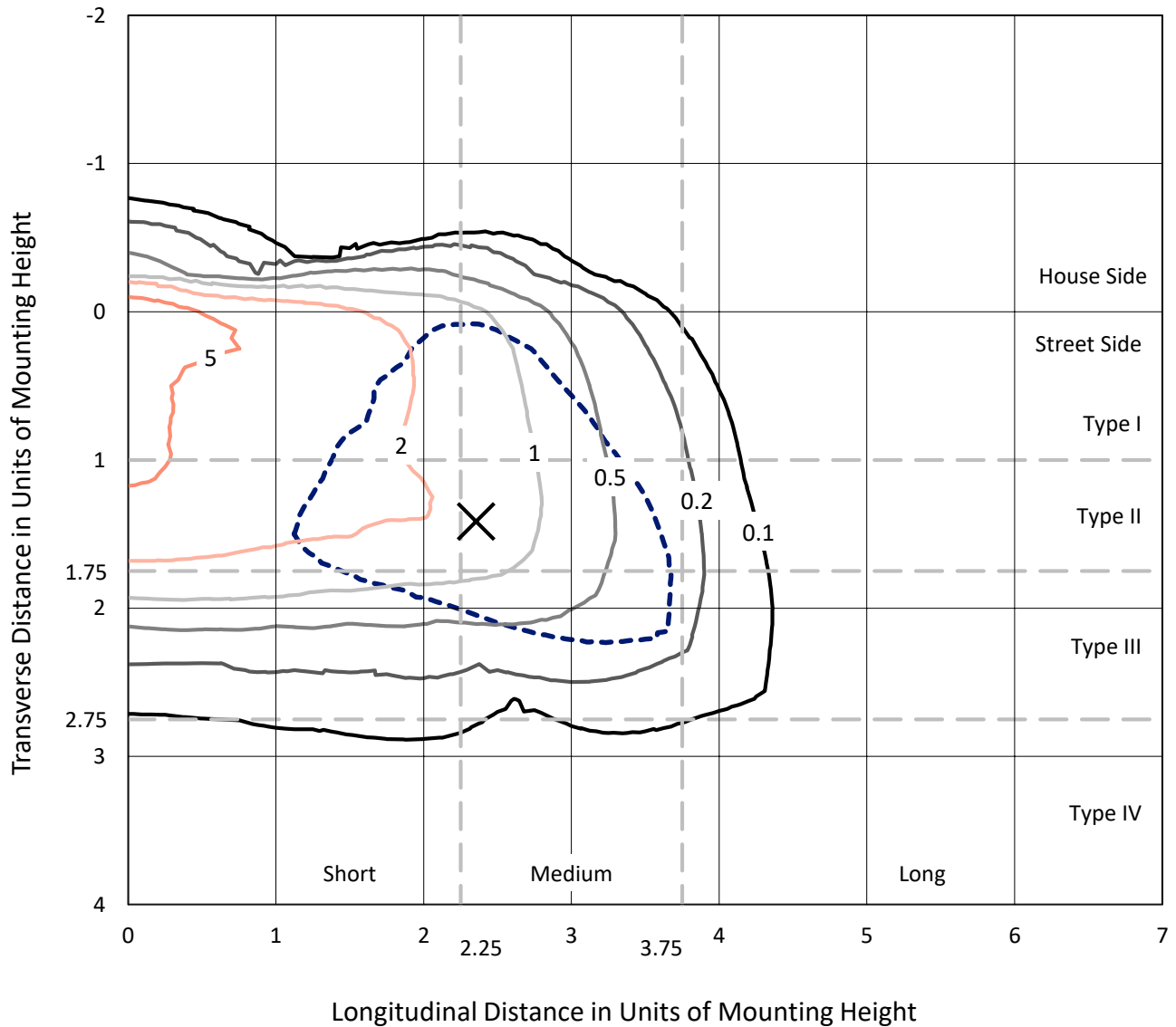


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Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd
 - - - 1/2 Max cd

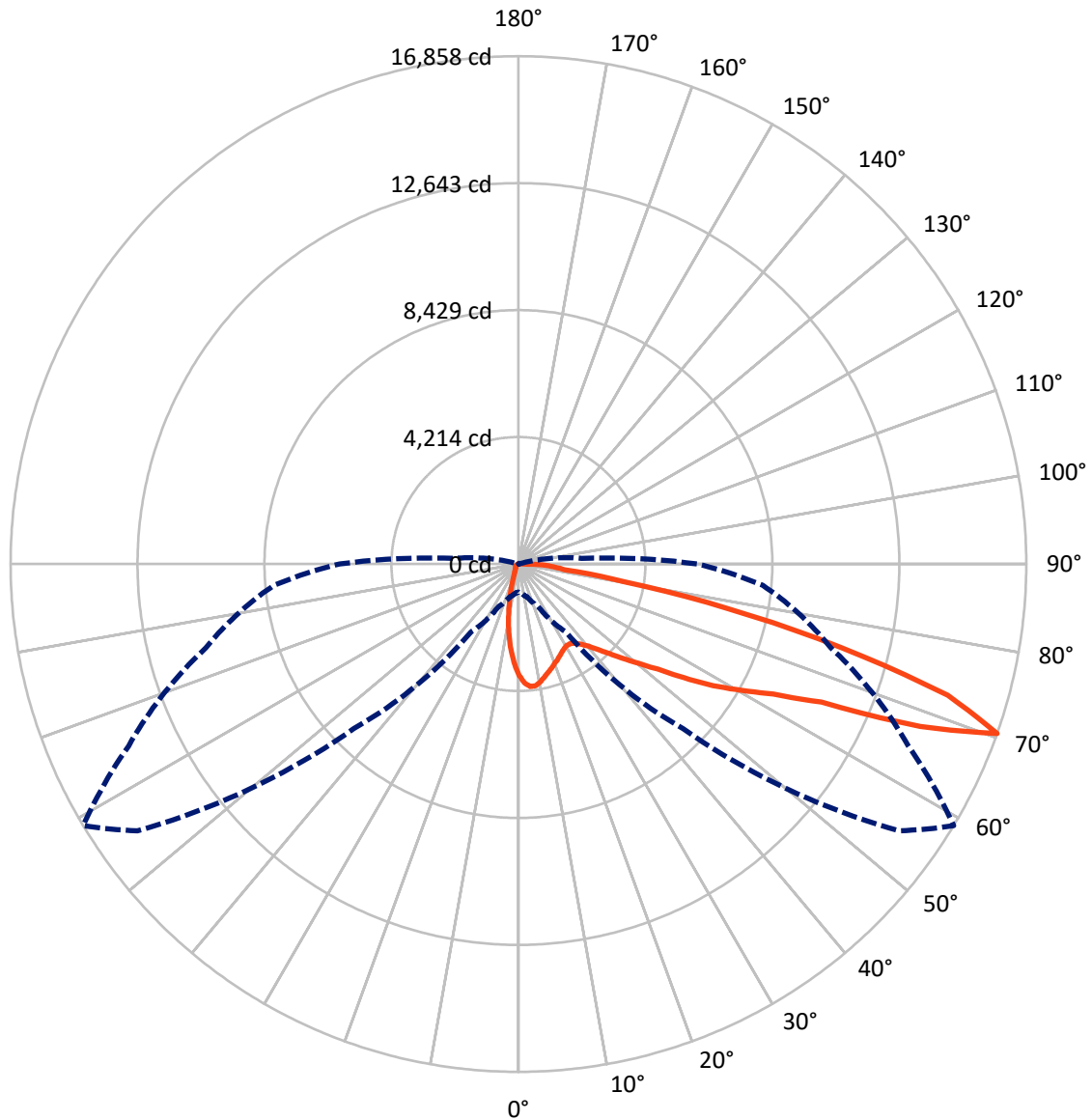


Based on 20 foot mounting height. Maximum calculated value = 9.9 fc
 Type III - Medium - Non-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 59-Deg Lateral - - - Horizontal Cone Through 70-Deg Vertical

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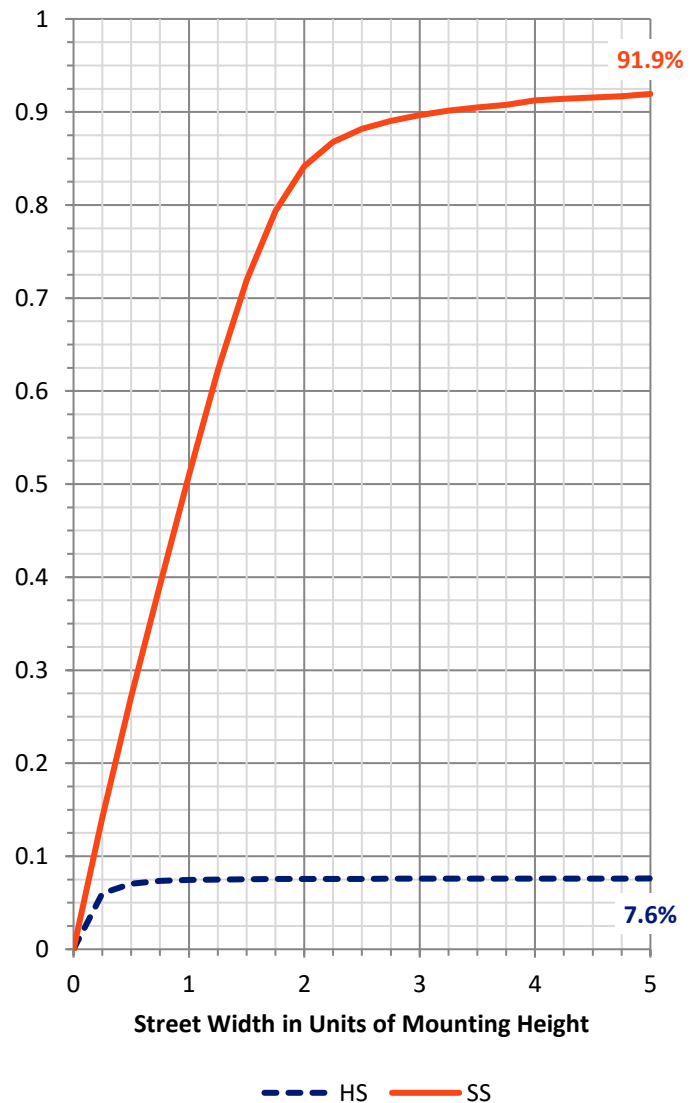
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1126.6	0.0	1126.6
	% Fixture	7.7	0.0	7.7
Street Side	Lumens	13528.9	0.0	13528.9
	% Fixture	92.3	0.0	92.3
Total	Lumens	14655.5	0.0	14655.5
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	304.7	2.1
10°-20°	639.2	4.4
20°-30°	865.2	5.9
30°-40°	1248.6	8.5
40°-50°	2073.7	14.1
50°-60°	3171.9	21.6
60°-70°	3945.1	26.9
70°-80°	2180.9	14.9
80°-90°	226.1	1.5
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-90°	14655.5	100.0
0°-180°	14655.5	100.0

Coefficient of Utilization



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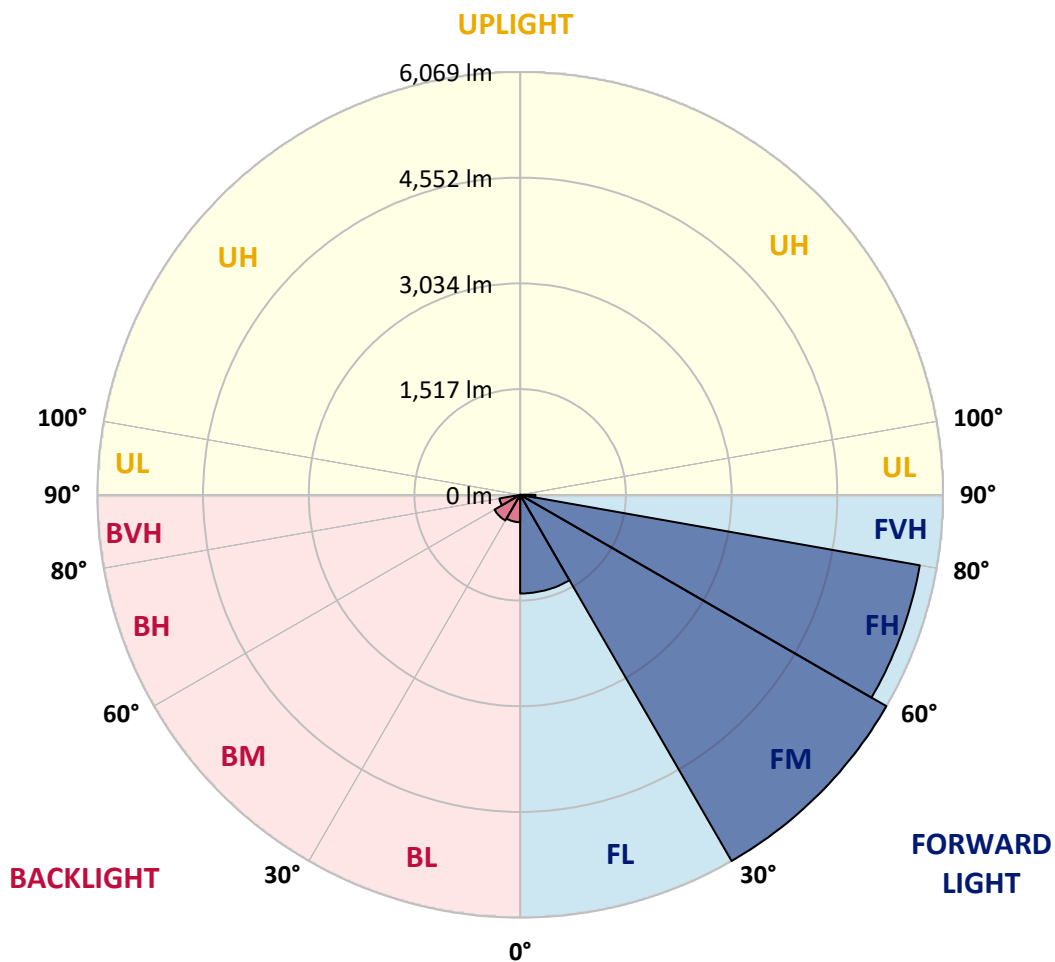
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1416.5	9.7			
FM	(30°-60°)	6069.0	41.4			
FH	(60°-80°)	5823.8	39.7			G3/7500
FVH	(80°-90°)	219.6	1.5			G2/225
BL	(0°-30°)	392.6	2.7	B1/500		
BM	(30°-60°)	425.3	2.9	B1/1000		
BH	(60°-80°)	302.2	2.1	B1/500		G1/500
BVH	(80°-90°)	6.5	0.0			G0/10
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G3

Type III Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	59°	65°	75°	85°
0°	3705.9	3705.9	3705.9	3705.9	3705.9	3705.9	3705.9	3705.9	3705.9	3705.9	3705.9
2.5°	4188.9	4182.4	4154.8	4149.2	4118.2	4056.2	3984.4	3955.6	3897.0	3804.2	3701.5
5°	4258.7	4262.0	4264.2	4251.9	4247.5	4196.7	4117.1	4082.8	4004.4	3851.8	3663.8
7.5°	3997.6	4006.6	4034.2	4046.3	4099.4	4119.3	4102.7	4080.6	4018.7	3838.5	3574.3
10°	3722.4	3739.0	3768.8	3788.7	3854.0	3907.1	3974.6	3980.0	3966.7	3794.4	3473.7
12.5°	3485.9	3501.4	3534.6	3574.3	3640.7	3709.1	3809.7	3845.1	3889.4	3765.5	3401.8
15°	3282.3	3286.9	3318.9	3368.6	3456.0	3549.9	3669.3	3721.3	3807.6	3754.5	3346.5
17.5°	3104.5	3105.5	3126.6	3171.8	3277.9	3401.8	3541.1	3609.7	3719.2	3739.0	3297.9
20°	2987.3	2986.1	2987.3	3011.6	3105.5	3252.6	3421.7	3493.6	3634.0	3720.2	3248.1
22.5°	2947.3	2941.9	2916.4	2907.6	2967.3	3096.6	3298.9	3393.0	3557.6	3714.8	3211.7
25°	2996.0	2992.8	2938.5	2887.7	2893.3	2974.0	3174.2	3289.1	3498.0	3734.7	3202.7
27.5°	3153.1	3146.5	3063.5	2964.0	2900.9	2915.4	3081.1	3201.6	3450.5	3783.2	3214.9
30°	3358.8	3359.8	3271.4	3150.9	3002.8	2920.8	3031.4	3145.3	3418.4	3856.2	3241.5
32.5°	3587.6	3586.5	3523.4	3384.2	3195.1	3022.5	3053.6	3149.7	3422.8	3963.4	3292.4
35°	3824.2	3812.0	3790.9	3668.3	3447.2	3200.7	3154.2	3224.9	3469.3	4105.0	3378.5
37.5°	4097.2	4092.8	4113.8	3984.4	3758.9	3462.6	3331.1	3378.5	3586.5	4313.9	3517.9
40°	4531.7	4507.3	4517.3	4341.6	4110.5	3815.3	3578.7	3590.9	3773.3	4590.2	3737.8
42.5°	5359.7	5261.4	5076.7	4747.4	4497.5	4206.7	3902.6	3881.7	4037.5	4925.2	4027.6
45°	6349.2	6236.5	5771.0	5195.1	4884.4	4626.8	4302.8	4246.5	4362.6	5324.3	4401.2
47.5°	7175.1	7053.5	6436.5	5662.6	5277.9	5060.2	4746.1	4679.8	4751.8	5787.6	4850.0
50°	7457.0	7389.5	6847.9	6051.8	5674.9	5546.7	5302.2	5191.8	5209.5	6287.3	5374.1
52.5°	7327.7	7304.5	6941.8	6318.3	6041.9	6084.0	5911.4	5795.3	5775.5	6833.4	5953.4
55°	7054.6	7043.5	6866.6	6466.4	6365.7	6576.0	6766.0	6665.5	6477.5	7413.9	6432.1
57.5°	6664.3	6706.3	6833.4	6751.8	6763.8	7095.5	7559.9	7611.8	7331.0	7876.0	6787.1
60°	5621.9	5734.5	6317.2	7058.0	7625.1	7960.1	8410.0	8507.3	8054.1	8192.3	7197.2
62.5°	4155.7	4317.3	5147.5	6508.4	8099.4	9604.0	9541.0	9497.9	8743.9	8615.6	7943.4
65°	2441.1	2630.1	3332.2	5085.6	7384.1	10660.9	11652.6	11055.6	9795.3	9495.7	9131.9
67.5°	1216.1	1217.3	1534.6	2684.3	5457.1	9923.5	14734.9	14389.9	12030.7	10792.4	9600.6
70°	935.3	960.7	1135.4	1559.9	2759.5	7728.9	15441.3	16857.7	14277.2	10735.0	8145.8
72.5°	792.7	809.3	1010.5	1357.6	2063.0	4243.1	13367.4	14900.7	13623.9	9070.0	6004.4
75°	570.5	583.8	894.4	1231.5	1899.3	2105.0	9169.4	11051.2	10222.1	6380.2	3304.5
77.5°	141.6	140.4	311.8	999.5	1699.2	1753.4	5261.4	7086.6	5865.0	2612.5	849.1
80°	63.1	60.8	70.7	210.1	1580.9	1655.0	2313.9	3578.7	2249.8	423.5	259.8
82.5°	44.2	42.0	44.2	77.3	528.5	1535.7	1398.5	1551.2	823.7	144.8	110.5
85°	14.4	13.2	24.3	65.2	148.1	885.5	1364.3	1158.6	612.5	62.0	74.1
87.5°	2.2	2.2	8.9	35.4	43.1	295.3	800.4	802.6	275.3	36.6	33.1
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	3705.9	3705.9	3705.9	3705.9	3705.9	3705.9	3705.9	3705.9	3705.9	3705.9	3705.9
2.5°	3649.5	3584.2	3492.5	3400.8	3317.8	3232.7	3164.1	3132.1	3117.7	3097.7	3054.6
5°	3565.5	3447.2	3245.9	3047.9	2863.3	2686.6	2535.0	2448.8	2356.0	2351.6	2306.2
7.5°	3430.5	3262.6	2945.3	2637.9	2356.0	2086.3	1854.0	1703.6	1600.9	1536.7	1492.5
10°	3280.3	3064.6	2644.5	2212.3	1828.6	1468.2	1169.8	975.1	856.9	797.2	762.8
12.5°	3160.7	2889.9	2348.2	1804.2	1323.4	909.9	632.3	490.8	427.9	403.5	392.5
15°	3058.0	2729.6	2070.8	1439.4	883.4	523.0	365.9	319.4	309.6	309.6	308.5
17.5°	2954.0	2574.8	1800.9	1081.2	556.1	342.8	288.5	281.9	283.1	286.3	286.3
20°	2855.6	2427.8	1541.1	770.6	364.8	274.3	262.0	259.8	263.2	267.5	266.4
22.5°	2776.0	2298.5	1298.0	529.6	280.8	248.7	241.0	237.7	239.8	243.3	242.2
25°	2719.7	2187.9	1074.6	369.3	244.2	226.6	217.7	213.3	211.1	213.3	212.3
27.5°	2685.5	2095.0	864.6	277.4	218.8	204.5	193.4	184.6	179.1	179.1	176.8
30°	2663.3	2007.7	677.7	230.0	197.8	182.4	166.9	154.8	146.0	143.6	142.7
32.5°	2662.1	1932.6	506.4	203.5	178.0	160.3	141.6	126.0	116.2	113.8	112.7
35°	2689.9	1871.7	372.5	183.6	160.3	139.2	118.2	101.7	92.9	92.9	91.7
37.5°	2761.7	1836.3	281.9	168.1	146.0	121.6	99.5	84.0	76.3	78.5	78.5
40°	2895.4	1829.7	230.0	155.9	133.8	106.1	80.7	68.5	65.2	68.5	68.5
42.5°	3100.1	1865.2	204.5	147.1	122.7	90.6	67.5	58.6	57.5	60.8	60.8
45°	3366.5	1934.7	190.1	139.2	110.5	75.2	56.4	50.8	49.8	54.2	54.2
47.5°	3689.2	2028.7	176.8	130.4	98.5	62.0	47.5	43.1	43.1	47.5	48.7
50°	4071.7	2155.8	163.6	121.6	88.5	51.9	39.9	36.6	37.5	42.0	43.1
52.5°	4511.7	2311.7	151.5	113.8	77.3	42.0	33.1	30.9	32.1	36.6	37.5
55°	4891.0	2447.7	137.1	106.1	63.1	34.2	27.7	26.5	27.7	33.1	33.1
57.5°	5221.6	2578.1	123.8	94.0	49.8	27.7	22.1	22.1	24.3	29.9	30.9
60°	5660.5	2783.8	112.7	79.6	37.5	21.0	17.6	18.8	22.1	26.5	27.7
62.5°	6437.8	3133.2	98.5	66.4	27.7	16.6	14.4	15.5	19.9	25.4	26.5
65°	7410.6	3463.8	81.8	55.2	21.0	12.1	11.0	14.4	19.9	25.4	26.5
67.5°	7311.0	3012.6	64.0	44.2	15.5	9.9	8.9	13.2	18.8	25.4	26.5
70°	5929.2	2111.6	47.5	29.9	12.1	8.9	8.9	13.2	18.8	24.3	25.4
72.5°	4112.7	1175.3	36.6	19.9	11.0	8.9	7.7	12.1	17.6	24.3	25.4
75°	1956.9	360.4	28.7	14.4	9.9	7.7	6.6	12.1	17.6	24.3	25.4
77.5°	375.9	91.7	23.3	12.1	8.9	7.7	6.6	11.0	17.6	23.3	24.3
80°	127.1	41.0	18.8	11.0	8.9	7.7	6.6	11.0	16.6	22.1	23.3
82.5°	69.7	23.3	16.6	9.9	8.9	6.6	5.5	9.9	15.5	22.1	23.3
85°	54.2	16.6	13.2	9.9	8.9	6.6	5.5	9.9	15.5	21.0	22.1
87.5°	27.7	12.1	11.0	9.9	8.9	6.6	5.5	8.9	14.4	19.9	22.1
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)